FOSSpicks

Sparkling gems and new releases from the world of Free and Open Source Software

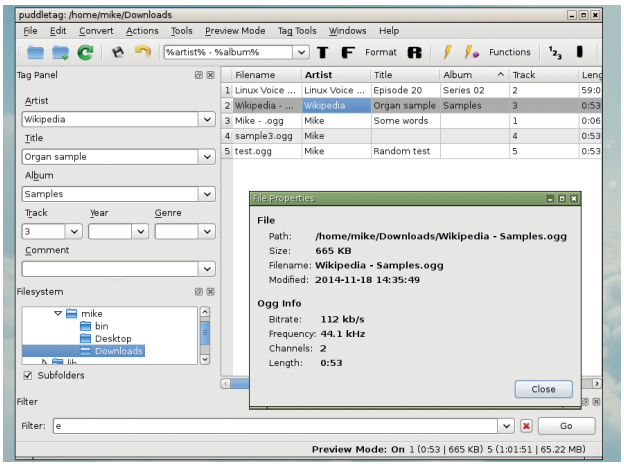
Mike Saunders has spent a decade mining the internet for free software treasures. Here's the result of his latest haul…

Sound file tag editor

Puddletag 1.0.5

We love discovering programs that ostensibly perform mundane tasks, but have so many features and options that they actually become rather cool. *Puddletag* is one such example: it's a music file tag editor. Riveting, right? But when you start exploring the interface and discover some of the complexity behind it, you actually start to admire it. And if you manage a large music collection, you might find that you can't live without it. Sure, most graphical music players on Linux include some kind of tag editing facility, but *Puddletag* is industrial strength.

It's written in Python (2) and uses *Qt 4* for the interface, so its main dependency is *PyQt4*. You'll also need *Mutagen* – this is the library that handles the low-level operations of adding tags to music files. On Ubuntu and Debian-based distros, you can get all of the dependencies via the **python-qt4**, **python-pyparsing**, **python-mutagen** and **python-configobj** packages. Then extract the **puddletag-1.0.5.tar.gz** file, go into the resulting directory, and run **./puddletag**.



Puddletag can work with ID3v1, ID3v2 (MP3), MP4, VorbisComments (Ogg and FLAC) and Musepack (mpc) tags.

I, spreadsheet

The first thing you'll notice is the unusual interface: *Puddletag* looks somewhat like a spreadsheet. This actually turns out to be a very good design when you're working on lots of files. Under the filesystem panel on the bottom-left, navigate into a directory containing audio files, and they'll appear in the list on the right. Just like in a spreadsheet, you can now click into cells and edit data – that's the simplest way to do it.

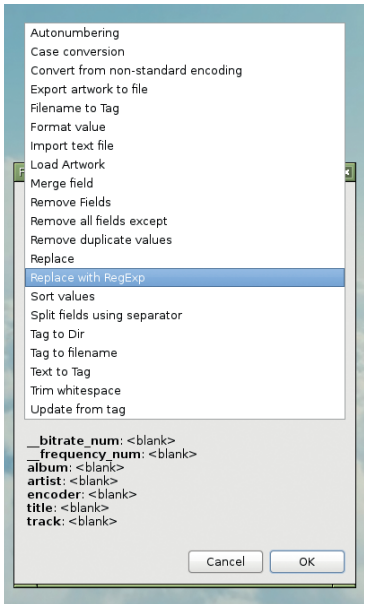
> **"Puddletag is almost as flexible as using a scripting language, but with the convenience of a GUI."**

Where *Puddletag* really shines, however, is in its automation facilities. Check out the drop-down list in the toolbar: there you can enter variables such as **%artist%** and **%album%**. You can use this to rename files according to tags, so say you have this in the drop-down list:

```
%artist% - %track%
```

If you now select an audio file and click on the F button in the toolbar, the file will be renamed according to the contents of its artist and track tags. In this way, you can turn **bachconcerto1.ogg** into something nicer like **Bach Concerto in G pt 1.ogg**. Excellently, you can do this for multiple files in the list by selecting them and clicking F – a great one-click way to clean up your music collection.

And that's just the start of it. You can create user-defined actions comprised of functions that sort values, merge fields, trim whitespace, convert case, and so much more. It's almost as flexible as using a scripting language, but with the convenience of a GUI, so if you have very specific requirements for your collection, *Puddletag* should handle them with aplomb.



Various functions are available to include in user-defined actions, such as regex-based text replacement.

PROJECT WEBSITE
http://puddletag.sourceforge.net

Operating system

PC-BSD 10

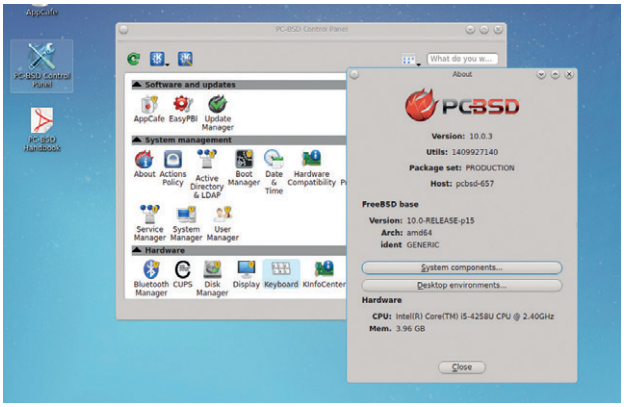
FreeBSD is a fine server operating system, sharing many of the same qualities that Linux has: it's open source, it's reliable, it's secure and it can run thousands of FOSS programs. Some people use it as a desktop OS, but it's not the best experience out of the box – quite a lot of manual work is required to get everything set up properly. That's not a criticism, as FreeBSD just provides a base system and expects you to know what you're doing, like in Arch Linux. But if you want to try something more newbie-friendly, PC-BSD, a desktop-oriented OS based on FreeBSD, is worth a look.

Version 10.0 is available as a 3.4GB ISO which you can burn to a DVD-R. For testing purposes, though, it's much easier to boot it up in *VirtualBox*. The minimum system requirements are 1GB of RAM and 20GB of hard drive space, but the PC-BSD team recommends 4GB and 50GB respectively. This might seem excessive, given that the FreeBSD core is rather svelte, but the choice of desktop environments and supplied apps makes it a beefy package.

After booting, you're given default settings for installation, including a KDE 4.12 desktop. You can change this to Gnome, Mate, *Xfce* or some lighter window managers. PC-BSD can take over the whole hard drive automatically; custom partitioning is also available. One reboot later and you're prompted to create a root password and normal user account, before landing at your chosen desktop.

A bundle of joy

One of PC-BSD's most notable features is its PBI packaging system. This aims to make software installation more Windows or Mac OS X-like, in that users can download single **.pbi** packages, double-click, and get a new program. All dependencies are bundled into the package, and it's installed in **/Programs**. This is in contrast to Linux, where dependencies are used more extensively and programs are scattered around the filesystem. Is PC-BSD's approach better? Well, it's certainly easier when it comes to grabbing new apps from the web, but there's a lot of duplication. If a security hole is discovered in a widely-used library, every PBI using that library has to be updated – this is more time-consuming than the shared library approach.



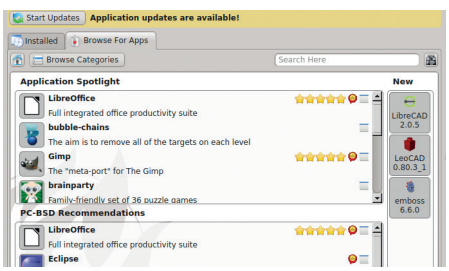
PC-BSD takes the solid server foundations of FreeBSD and adds a user-friendly desktop and packaging system.

"PC-BSD's packaging system aims to make software installation more Windows- or Mac OS X-like."

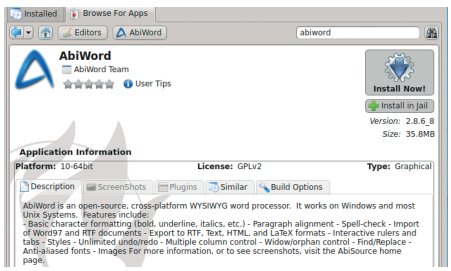
So, why else would you consider using PC-BSD rather than Linux? There's not a lot between them, although hardware support tends to be broader in Linux. Pretty much every major FOSS desktop app is available in PC-BSD – *LibreOffice*, *Firefox*, *Gimp* and so forth. There's also the usual gamut of development tools. But PC-BSD has a few aces up its sleeve as well, inherited from FreeBSD, such as excellent ZFS support. ZFS is a filesystem that features storage pools, snapshots, compression, corruption prevention and many other goodies. Meanwhile, FreeBSD jails are like chroot on steroids, and the licence makes it much easier to incorporate into proprietary software (if that's your wish).

PROJECT WEBSITE
www.pc-bsd.org

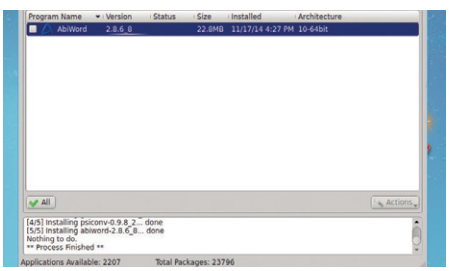
How it works: Adding software



1 AppCafe
Click the *AppCafe* icon on the desktop, and enter your password when prompted. You'll see a cluttered window – resize it to make more space.



2 Search
AppCafe shows recommended applications by default; use the search bar to find a specific application. Click its name in the list up details.



3 Install
Click Install Now, or Install In Jail to set it up in a restricted environment. The latter option is recommended for untrusted programs.

Video/audio transcoder

Transmageddon 1.5

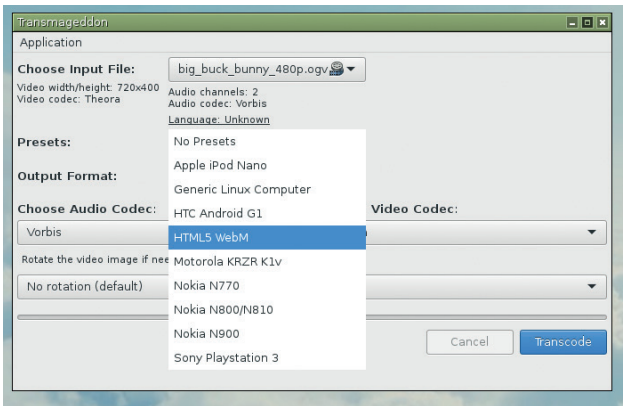
We're pretty hardcore geeks at Linux Voice. But one thing has always terrified us: *Mencoder*. This tool, part of *MPlayer*, is tremendously powerful when it comes to converting media from one format to another. But it's insanely complicated – the man page alone contains almost 45,000 words!

So we're always on the lookout for graphical tools that make the job a lot simpler. *Handbrake* and *VLC* work well here, but *Transmageddon* is an excellent lightweight alternative. It's built on Gnome libraries – although it ran without any problems on our minimalist *Openbox* installation – and uses *GStreamer* to handle media codecs. So if you want to transcode into the widest possible range of formats, install the "bad" and "ugly" *GStreamer* codec packages.

Bizarrely, *Transmageddon* doesn't open a file if you specify it at the command line. We're not sure if this is just a simple oversight, but anyway: you can choose the input file once the GUI appears. *Transmageddon* will identify the audio and/or video codecs used by the file, and provide some extra information such as the resolution and number of audio channels. You can then choose the container for the output format, such as Ogg, Matroska, AVI, FLV, WebM and others, and then specify the audio and video codecs to be used inside the container.

Hurrah for codecs!

So far so good. But what makes *Transmageddon* especially useful is its in-built profiles, which let you convert for specific devices and platforms without having to know the details about them. Under the Presets drop-down menu, for instance, you can choose from various mobile phones, the Sony PS3, a "generic Linux" profile (Ogg Vorbis and Theora), HTLM 5 video, and more. These profiles are stored in XML format in **/usr/share/transmageddon/profiles** – you can easily edit them to create your own for other devices.



Transmageddon has a limited range of options, but it's great for quick converting tasks.

PROJECT WEBSITE
www.linuxrising.org

Drop-down terminal

Guake 0.5.1

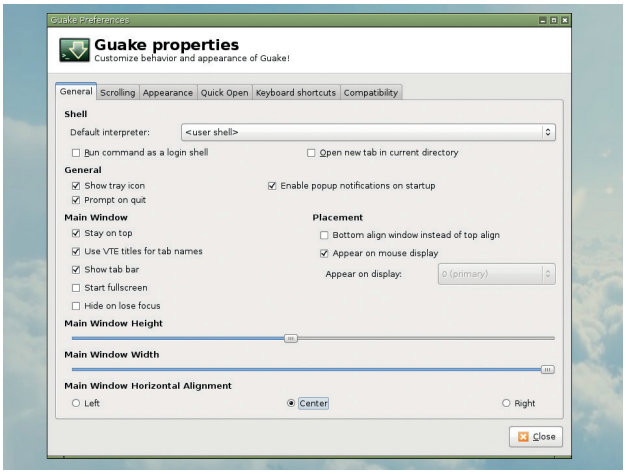
If you do a lot of work in the terminal, you probably have several terminal windows at any one time, and can easily identify them in your taskbar or window list. Alternatively, you might use something like *tmux* to switch between your command-line apps inside a single terminal window. Either way, this makes sense when you have various regularly-used programs or shell prompts running all the time.

But what if you quickly need to enter a command, and don't want to open yet another terminal window? *Guake* is the answer. It's an ultra-fast terminal that pops down from the top of the screen when you hit a certain key (by default, bound to F12).

Guake has been doing the rounds for a while, but as a Gnome app it's usually not well known by users of other desktops. We gave it a try on a plain *Openbox* setup, and were pleased to see that it works excellently. It's also attractive, picking up on the desktop wallpaper and showing it in the background of the terminal window, slightly darker to make the white terminal text stand out.

By default, *Guake* takes up the top half of the screen when you hit F12, but you can change this in the settings. Right-click on the *Guake* notification area icon and choose Preferences; then note the Main Window Height option. You can also make the terminal narrower, and determine where it appears.

Under the Appearance tab it's possible to change the font and transparency effect, while the Keyboard Shortcuts tab lets you redefine the key that's used to open the terminal. *Guake* does everything it's supposed to: it's fast, it's easy to configure, and it's perfect for those times when you need to run a quick command without adding yet more windows to your already busy desktop.



Don't like the defaults? Change *Guake*'s appearance and keyboard shortcuts with just a few clicks.

PROJECT WEBSITE
https://github.com/Guake/guake

Tiling terminal window manager

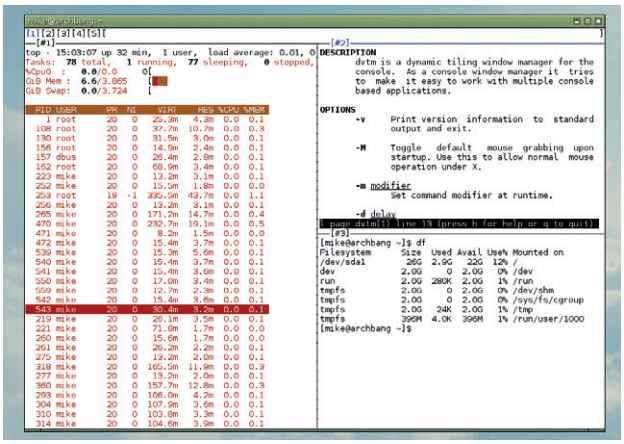
Dvtm 0.13

There's a lot of talk `t the moment about the "Unix philosophy". In general, most people agree that this means small programs, with single objectives, that can be fitted together (eg with pipes or redirection) to solve larger tasks. This philosophy inspired the developer of *Dvtwm*. It lets you split your terminal window up into tiles, with individual command line sessions inside them. But that's all it does; it stays away from session management, for instance, which is provided in a separate program (*Abduco*).

But what's the benefit of tiling? Well, tiling window managers, such as *i3*, are becoming popular on Linux desktops, especially for power users. They maximise screen space usage and let you switch layouts quickly, so you can can have the main part of your screen devoted to, say, *Firefox*, with various terminals around it showing docs, server stats and so forth.

When you start *Dvtm*, you'll be greeted by just another terminal prompt. Hit Ctrl+G followed by C, however, and you'll see the terminal splits into two windows, one left and one right. Hit Ctrl+G followed by C once more, and the right-hand pane will be split into two. These are the basics of tiling. Ctrl+G in *Dtwm* is known as the "mod" key – it's the key combo that you press before doing any other action.

For instance, press mod followed by Space, and *Dtwm* will shift to a different layout, separating the screen vertically with two windows at the top and one at the bottom. Do mod and Space again for yet another layout. It's awesome: with a full-screen terminal window, you can create some very useful layouts without having to manually resize anything.



Don't overload your desktop with terminal windows – use *Dvtm* and run multiple programs in a single one.

"Dvtwm lets you split your terminal window up into tiles."

PROJECT WEBSITE
www.brain-dump.org/projects/dvtm/

Multi-system emulator

Mednafen 0.9.33

Mednafen is the mother of all emulators. It can play games from a large range of systems, which might leave you thinking: what's the point? There are already good SNES, Mega Drive, Game Boy etc. emulators out there, so why do we need a single program to emulate them all? Well, if you're a retro gaming fan who likes to play games from a range of systems, life is much easier when you only have to configure one emulator. Set up *Mednafen* with the exact graphics, sound and input options that you want, and you can then play all your games without learning a load of different tools.

Mednafen is included in many distro repositories, or if you're compiling from source code, the main dependencies are SDL, *libcdio* and *libsndfile*. And there's something worth noting about SDL: when we first tried the emulator, we didn't get any sound output. To fix it, we had to edit **~/.mednafen/mednafen-09x.cfg** and change the **sound.driver** line from **default** to **sdl**. If you're running an Ubuntu-based distro and have the same problem, try that fix.

A cornucopia of consoles

Mednafen emulates (deep breath): Game Boy, Game Gear, NES, Master System, Super NES, Mega Drive (aka Genesis), Virtual Boy, Atari Lynx and some fairly obscure handhelds like the Neo Geo Pocket and WonderSwan. The emulation was fast and glitch-free with the games we tried. *Mednafen* supports saved states, real-time game rewinding, screenshot-taking and even the ability to make videos in various formats. It can take a while to set up, but the configuration file is well documented and when it's working properly, it's one of the best multi-system emulators we've come across.

Mednafen handles Mode 7 games like *Super Mario Kart* (the best version, we think) wonderfully.

PROJECT WEBSITE
http://mednafen.sourceforge.net

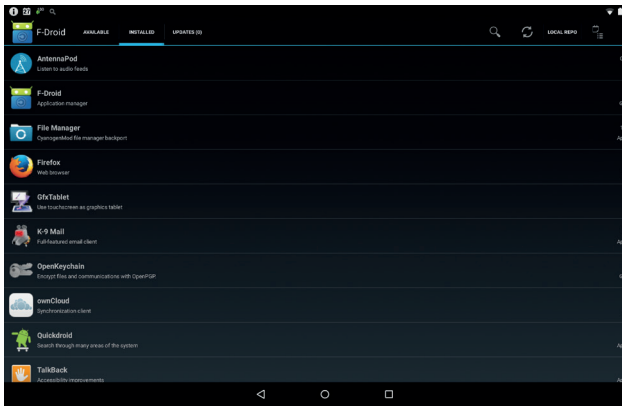
Android open source package manager

F-Droid 0.76

We thought we'd take a short break from regular service and look at a couple of Android 'apps'. "Wooah..." you might say, "Aren't the majority of apps on Android proprietary?" Yes, this is true. But open source applications are being released for Android too, and what's better is that you don't need Google's Play store to use them.

F-Droid is an open source package manager for Android, and it's the only package you'll need to install manually. You can do this by first enabling 'Unknown sources' in the Security panel of your device, and then by downloading the *F-Droid* **apk** package onto your Android device using a web browser. You can also open a QR code from a desktop browser. Android should ask whether you want this package installed automatically, and you should soon find *F-Droid*'s copyleft-inspired icon lurking in your launcher.

As with any other Linux package manager, you need to first update the database of files held in the repositories. You can do this from the drop-down menu, and with the database populated, you'll see a list of packages under the 'Available' heading. Any of these can now be installed first by tapping on the package, then by clicking on the small 'plus' symbol at the top of the screen. If you run *F-Droid* periodically, it will check for package updates too, and these can be installed automatically. A new feature in the latest version is the ability to share your local package cache as a local repository.



When Google Play isn't available, such as on Cyanogenmod, *F-Droid* becomes absolutely essential.

> **"F-Droid is an open source package manager for Android."**

Tap on 'Local Repo' and a QR Code appears. Tap on the 'Turn on' button and then anyone who scans the QR Code with their Android device can install packages directly off your own Android device. *F-Droid* isn't as aesthetically pleasing as Google Play, but it's definitely more ethically pleasing.

PROJECT WEBSITE
https://f-droid.org

Android open source email client

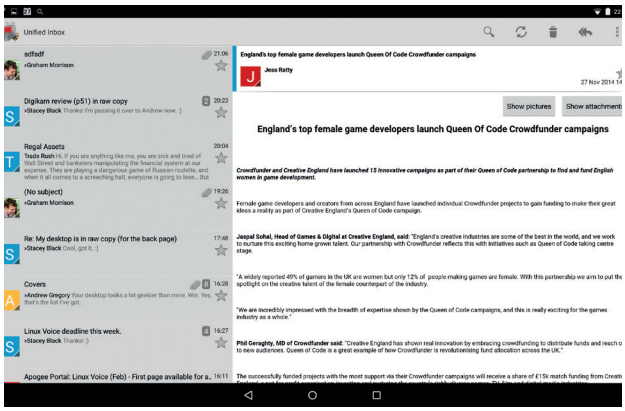
K-9 Mail 5.001

This is another Android application, and perhaps not coincidentally, it can be installed easily via *F-Droid* (although you can also install the same application through Google Play). It's open source and being developed just like any other open source application. Tim Bray, who we interviewed last month, is even one of its contributors.

Put simply, *K-9 Mail* is utterly brilliant. It's like installing an old desktop email client onto your mobile device. Only better. You can easily manage more than one account from a single app, even migrating Gmail if you don't like its new responsive and configuration-free interface. Messages are still threaded and sorted and placed in a unified inbox, if you want them to be. IMAP-pushed notifications are also powerful. We have our work email flashing the LED the colour of Linux Voice red, and you can change the sounds too.

Perhaps most importantly, *K-9 Mail* can integrate with OpenKeyChain (and APG), also available from *F-Droid*. OpenKeyChain enables you to manage your public and private keys, as well as import keys for your contacts and add and decode encrypted emails. We'd love to see PGP/MIME integration for convenience, but we know of no other Android solution that can offer the same level of security.

Outside of our encryption paranoia, *K-9* still excels, whether you're searching for emails, adding different signatures, having multiple identities, themeing, attachment saving and even keyboard shortcuts. It doesn't look quite as modern as the new Gmail, and attachments aren't quite so well integrated, but it can be made to look lovely


Unified Inbox
England's top female game developers launch Queen Of Code Crowdfunder campaigns
Show pictures
Show attachments
England's top female game developers launch Queen Of Code Crowdfunder campaigns

Tim Bray, who we interviewed last month, is helping develop part of *K-9 Mail* on Android.

This is an app that turns your mobile or tablet from a convenience into a productivity tool. We only wish we could banish email from our lives and forget *K-9* is so good.

PROJECT WEBSITE
http://k9mail.org

FOSSPICKS Brain Relaxers

Transport simulator

Simutrans 120

Ever since the glory days of *Sim City* on the Amiga we've really enjoyed playing sim-like games. There's something incredibly satisfying about creating your own little world, trying to make everybody happy, and then trashing the whole place if it doesn't work (or you just get bored and need some cathartic release via mindless destruction).

Simutrans is a transport simulator, so when you start it, the environment is populated with towns and villages. Your goal is to connect these locations with infrastructure such as roads and railways, helping people and products to move between the settlements and build a thriving economy. You have to monitor your cash flow, investing in infrastructure for longer gains down the road (no pun intended).

Telegraph road

When creating a new game, you can define the size of the playing area, and how many settlements it has. Then use the toolbar icons at the top to start building: if you hover the mouse over the icons, you'll see different prices for various road types. So if your money (shown at the bottom) is running low, you can opt for cheaper dirt tracks, for instance. To create a road or railway, click and drag between two points, and *Simutrans* will create the shortest path.

It's not the easiest game to get into, and you'll have to spend some time in the documentation to really get the most of it, and the teeny-tiny icons can be fiddly to work with. But there's a busy online community supporting the game, so it's easy to get help.

Simutrans's pixel artwork is nicely detailed, but hard to see on high-res monitors. You can zoom in though.

PROJECT WEBSITE
www.simutrans.com

Action game

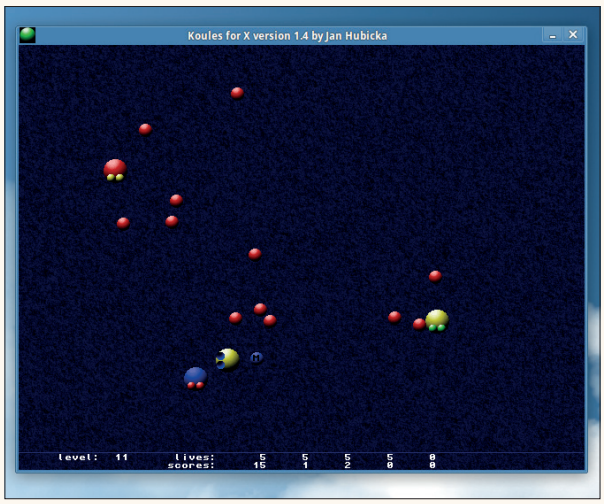
Koules 1.4

Prepare yourself: this game is hardly cutting edge or fresh by any definition. Indeed, it hasn't been updated since 1998. So why are we covering it here? Well, for three reasons: this author had a dream about it recently, an actual dream involving installing software. Secondly, the game can still be found in many distro repositories. And third, it's still a classic!

If you're running Debian, Ubuntu or Fedora, you should be able to install *Koules* from the repos like any regular program. In Arch Linux it's available in the AUR, as opposed to the normal repositories.

Anyway, once you've started *Koules*, keep tapping Enter to skip past the *Star Wars*-esque intro text. At the main menu, select Start Game and hit Enter. Your character is the yellow ball with blue eyes, and you'll notice a number of small balls moving in your direction and bouncing off one another. Your job is to move your player with the cursor keys and bash the small balls onto the edge of the screen to destroy them.

This might sound easy, but it gets very tricky, very quickly. With each level more and more balls appear and try to bash you onto the edges, in which case you lose a life. Some balls don't immediately explode on contact with the edges, but turn into powerups giving you extra speed and mass. The game is massively addictive and makes you laugh at times, given the craziness of the gameplay – so we're glad to see that it still runs on modern Linux distros today.



A multiplayer mode is available, and there's even an Android port on the Play Store.

PROJECT WEBSITE
www.ucw.cz/~hubicka/koules/English